UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,420	04/26/2001	Ian Michael Charles Shand	CISCP207	1366

22434　　7590　　06/14/2006	EXAMINER
BEYER WEAVER & THOMAS LLP	BLAIR, DOUGLAS B

BEYER WEAVER & THOMAS LLP
P.O. BOX 70250
OAKLAND, CA 94612-0250

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/844,420	SHAND ET AL.
Office Action Summary	Examiner	Art Unit	
	Douglas B. Blair	2142	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 March 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-50</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-50</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some *   c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Claims 1-50 are currently pending in the application.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 19-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. Claims 19-25 recite a machine readable medium that is defined

on page 24 of the specification as being possibly a carrier wave or other energy form, rendering

the claims non-statutory.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

6.   The applicant's invention is generally understood to be a way of updating a node's link

state database following a disruption in communications from this node. The node updates itself

using Complete Sequence Number Packets that are messages that indicate the link state packets

that are present in a node's link state database (page 15, lines 21-22 of applicant's specification).

Typically, a node sends out an empty CSNP when a node has restarted to re-constitute its link

state database however an empty CSNP packet will not warrant an acknowledgement from a

neighboring node (page 15, line 22-page 16, line 3). The applicant is claiming a dummy link

state packet that will solicit an acknowledgement to a CSNP that would have otherwise been

unacknowledged. A dummy link state packet is defined as "any link state packet that receiving

node 111 will not have referenced in the link state database associated with receiving node 111"

(page 16, lines 10-12). The purpose of the dummy link state packet is to get the neighboring

node to acknowledge the CSNP packet with a Partial Sequence Number Packet (page 16, lines

17-21).

7.   Unfortunately, the applicant's specification does not describe **how a restarting or**

recovering node would know what packets a neighboring node has in its link state database

if the restarting node does not even know what packets are in its own link state database.

The restarting node would have to know of a link state packet that is not referenced in a

neighbors database in order to ensure that a PSNP packet were sent back in response to the

CSNP that references false link state packets. But if the restarting node's link state database is

empty, then it would seem impossible for the restarting node to have any knowledge of

information that would provide it with a means for determining what information the

neighboring node has or does not have in its database. Because the applicant's specification

does not provide any guidance for one skilled in the art trying to implement the applicant's

invention on how to create a dummy link state packet that does not reference a link state packet

in a neighbors link state database, an undo burden of experimentation is placed on anyone trying

to implement the invention. Also, since there is no description of how a dummy packet can be

successfully created, the applicant's disclosure fails to put the public in possession of the

applicant's invention.

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

9.   Claims 10-11 and 35-36 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

10.   Claims 10-11 and 35-36 are rejected under 35 U.S.C. 112, second paragraph, as being

incomplete for omitting essential structural cooperative relationships of elements, such omission

amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The

omitted structural cooperative relationships are: the claimed dummy link state packets are only

disclosed as being CSNP packets. CSNP packets reference link state packets, but have no data

field representing a network node (See RFC 1195: IS-IS specification, cited in Office Action

mailed on 6/6/2005) so it is unclear how a dummy link state packet as disclosed by the applicant

could reference a non-existent network node or an unused network node identifier as in claims

11 and 36.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12.   Claims 1-9, 12-34 and 37-50 are rejected under 35 U.S.C. 102(e) as being anticipated by

U.S. Patent Number 6,820,134 to Zinin et al..

The applied reference has a common assignee and inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35

U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing

under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived

from the inventor of this application and is thus not the invention "by another," or by an

appropriate showing under 37 CFR 1.131.

13.   As to claim 1, Zinin teaches a method for a network node connected to one or more

neighboring nodes in a network to acquire link state information from one or more neighboring

nodes, the method comprising: transmitting a first message from the network node to a first

neighboring node, the first message referencing dummy link state information that includes link

state information not referenced in a link state database included in the first neighboring node

(col. 7, lines 32-51, the term dummy information is interpreted based on the applicant's

specification at page 16, lines 10-14); receiving a second message from the first neighboring

node, the second message referencing dummy link state information, the second message

corresponding to an acknowledgement of receipt of the first message by the first neighboring

node (col. 8, lines 14-25); receiving one or more link state packets form the neighboring node,

the one or more link state packets corresponding to network link state information (col. 7, lines 32-51).

14.   As to claim 2, Zinin teaches the method of claim 1, wherein the network node is ignoring the second message (col. 7, line 66-col. 8, line 13).

15.   As to claim 3, Zinin teaches the method of claim 1, wherein the first and second messages are IS-IS messages (col. 7, lines 20-31).

16.   As to claim 4, Zinin teaches the method of claim 1, wherein the first message is a Complete Sequence Numbers Packet (col. 7, lines 20-31).

17.   As to claim 5, Zinin teaches the method of claim 1, wherein the second message is a Partial Sequence Numbers Packet (col. 7, lines 20-31).

18.   As to claim 6, Zinin teaches the method of claim 1, further comprising transmitting a third message form the network node to a second neighboring node, the third message referencing dummy link state information (col. 7, lines 5-19).

19.   As to claim 7, Zinin teaches the method of claim 6, further comprising transmitting a fourth message from the network node to the first neighboring node, the fourth message containing no reference to dummy link state information and directing the first neighboring node to transmit link state information not reference in the fourth message to the network node (col. 7, lines 32-51).

20.   As to claim 8, Zinin teaches the method of claim 1, further comprising receiving link state information and populating a link state database with the link state information (col. 7, lines 32-51).

21.   As to claim 9, Zinin teaches the method of claim 1, further comprising using the link sate

information to generate a routing table (col. 7, lines 32-51).

22.   As to claim 12, Zinin teaches a method for a network node in an network to request link

state information from one or more neighboring nodes, the neighboring nodes coupled with the

network node, the method comprising: maintaining in persistent storage information identifying

one or more neighboring nodes (col. 7, lines 32-51); restarting the routing control protocol,

wherein restarting the routing control protocol clears a link state database (col. 7, lines 32-51);

transmitting heartbeat messages to one or more neighboring nodes, the heartbeat message

containing information from persistent storage identifying the one or more neighboring nodes to

indicate that the network node is alive (col. 7, lines 20-31, Zinin teaches the use of IS-IS

messages and heartbeat messages are inherent to IS-IS messages, see section 1.1); transmitting a

first link state information request message to a first neighboring node, the first link state

information request message referencing dummy link state information that includes link state

information not referenced in a link state database included in the first neighboring node (col. 7,

lines 32-51); and transmitting the second link state information request message to a second

neighboring node, the second link state information request message referencing link state

information (col. 7, lines 32-51).

23.   As to claim 13, Zinin teaches the method of claim 12, further comprising receiving a

partial link state information request message from the second neighboring node, the partial link

state information request message referencing dummy link state information, wherein receipt of

the partial link state information request message acknowledges that the second neighboring

node received the second link state information request message (col. 7, lines 32-51).

24.   As to claim 14, Zinin teaches the method of claim 12, wherein transmitting the second

link state information request message occurs after transmitting the first link state information

request message (col. 7, lines 32-51).

25.   As to claim 15, Zinin teaches the method of claim 12, wherein the first message is a

Hello message (col. 7, lines 20-31).

26.   As to claim 16, Zinin teaches the method of claim 12 wherein the second message is a

complete sequence numbers packet (col. 7, lines 32-51).

27.   As to claim 17, Zinin teaches the method of claim 12, wherein a message being Partial

Sequence Numbers Packet (col. 7, lines 32-51).

28.   As to claim 18, Zinin teaches the method of claim 12, further comprising generating a

routing table with the link state packets from one or more neighboring nodes, wherein the routing

table is generated when no link state packets have been received for a predetermined period of

time (col. 8, lines 14-25).

29.   As to claims 19-25 and 44-50, they have similar limitations to claims 1-7 and are rejected

for the same reasons as claims 1-7.

30.   As to claims 26-34, they have similar limitations to claims 1-9 and are rejected for the

same reasons as claims 1-9.

Response to Arguments

31.   Applicant's arguments, see Remarks, filed 3/9/2006, with respect to the Narvaez-

Guarnieri reference have been fully considered and are persuasive. The 103 rejection based on

Narvaez-Guarnieri of claims 1-50 has been withdrawn.

32.   Applicant's arguments with regard to Zinin have been fully considered but they are not

persuasive.   Since the applicant is arguing features which the examiner feels are not enabled the

claims can only be interpreted as a standard IS-IS routing system which Zinin teaches.
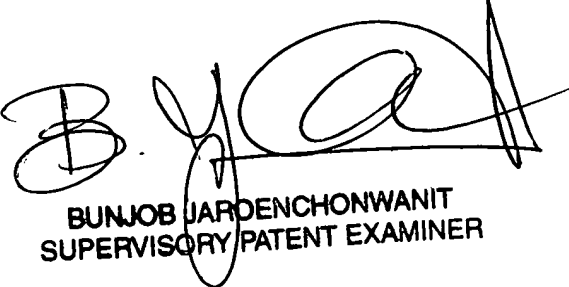

Conclusion

33.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Douglas B. Blair whose telephone number is 571-272-3893. The

examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Douglas Blair

BUNJOB JARDENCHONWANIT
SUPERVISORY PATENT EXAMINER